

10

How are Permits Established for Mills that Decide to Enter the Voluntary Advanced Technology Incentives Program?

EPA established the Voluntary Advanced Technology Incentives Program (VATIP) to encourage existing and new direct dischargers subject to Subpart B to achieve more stringent ELG&S by implementing advanced pollution prevention controls (40 CFR §430.24(b)) and §430.25(c)). By enrolling in VATIP, mills receive additional time to comply with the rule and reduced monitoring requirements (among other incentives). This section presents the VATIP ELG&S, the extended compliance dates, and the reduced monitoring requirements. Note that there is no comparable program for mills subject to Subpart E or for indirect discharging mills. Refer to the *Voluntary Advanced Technology Incentives Program Technical Support Document* for more detail.

What Are the VATIP ELG&S?

VATIP comprises three tiers of ELG&S that reflect increasingly more effective levels of environmental protection that mills can achieve by implementing advanced pollution prevention technologies. Table 10-1 presents the VATIP requirements for each tier. Existing direct dischargers are eligible to enroll in any one of the three tiers (Tier I, II, or III) and new direct dischargers are eligible to enroll in either of the two more stringent tiers (Tier II or III).

Mills can choose to enroll in VATIP on a line-by-line basis. For instance, a mill subject to Subpart B with more than one fiber line may decide to enroll all or some of its fiber lines in VATIP. Only those lines enrolling in VATIP are subject to VATIP requirements. For nonparticipating fiber lines, you must apply BAT, if the mill is an existing source, or NSPS, if the mill is a new source.

Mills may choose to meet VATIP requirements immediately, but they are not required to do so. Mills have six or more years to meet the requirements of the selected tier. Before that time, you must apply appropriate conventional pollutant limits and continuously revise permit limits for all chlorinated pollutants during phases of the VATIP process.

Table 10-1: VATIP Effluent Limitations Guidelines and Standards

Tier	Kappa Number (Annual Average)	Filtrate Recycling	Total Pulping Area Condensate, Evaporator Condensate, and Bleach Plant Wastewater Flow (Annual Average)	End-of-Pipe AOX (kg/kkg)			
				Non-TCF (a)		TCF	
				Maximum for Any One Day	Annual Average	Maximum for Any One Day	Annual Average
Tier I	20 for SW 13 for HW	(b)	NA	0.58	0.26	<ML (c)	(d)
Tier II	NA	(b)	10 m ³ /kkg	0.23	0.10	<ML (c)	(d)
Tier III	NA	(b)	5 m ³ /kkg	0.11	0.05	<ML (c)	(d)

(a) Non-TCF: pertains to any fiber lines that does not use exclusively TCF bleaching processes.

(b) Complete recycling to the chemical recovery system of all filtrates generated prior to bleaching. Under Tier I, this includes all filtrates up to the point where the kappa number is measured.

(c) <ML means less than the minimum level specified in 430.01(i) for that particular pollutant.

(d) This regulation does not specify this type of limitation for this pollutant; however, you may do so as appropriate.

NA - Not applicable.

What are the Extended Compliance Dates?

To encourage existing mills to enroll in VATIP, EPA has extended the compliance deadlines. (Note that new sources enrolled in the program must meet VATIP ELG&S upon commencing operation). The deadlines are structured so that the tier with the most stringent ELGs allows the greatest amount of time for compliance. All mills have until April 15, 1999 to determine whether they would like to enroll. Mills may still enter VATIP after this time. However, mills enrolling after this date may not receive additional compliance time and must demonstrate compliance by the deadline of the selected tier.

Mills enrolled in Tier I are allowed up to April 15, 2004, to meet Tier I requirements. This tier is based on oxygen delignification, a commercially available technology; therefore, EPA has determined the Tier I compliance date provides enough time for mills to install this technology. You may find that some mills already operating oxygen delignification will enroll in VATIP and request that their permit be updated immediately to include VATIP ELG&S, so that they can immediately benefit from the program's reduced monitoring requirements.

Mills enrolling in Tiers II and III are allowed until April 15, 2009, and April 15, 2014, respectively, to fully comply with VATIP ELG&S. EPA believes this provides enough time for these mills to resolve the technical and economic difficulties associated with developing and implementing flow reduction technologies. **Note that Tier II and III mills, however, must achieve baseline BAT for AOX, TCDD, TCDF, chloroform, and the chlorinated phenolic pollutants by April 15, 2004** (discussed in more below). Again, mills enrolling in Tiers II and III may choose to meet their VATIP ELG&S prior to the final date so that they can obtain immediate VATIP benefits.

Must I Require the Mill to Submit a Milestones Plan?

In the July 7, 1999 Federal Register (36580-36586), EPA promulgated additional language to the VATIP requirements that would require mills to prepare a Milestones Plan covering all fiber lines enrolled in the program to their permitting authority (reserved in Section 430.24(c)). The milestones plan will reflect how the mill determined how to ultimately achieve the limitations for their selected tier. The plan will provide you with the information necessary to develop interim milestones for the mill.

Scope of the Milestones Plan

The Milestones Plan must describe each technology component or process modification the mill intends to implement to achieve the VATIP BAT limits. In addition, the plan must include a master schedule showing the sequence of implementing the new technologies and process modifications and identifying critical path relationships within the sequence. For each individual technology or process modification, the Milestones Plan must include:

1. A schedule listing the anticipated date(s) that associated construction, installation, or process changes will be initiated and completed;
2. The anticipated date that the process or individual component will be fully demonstrated as operational; and
3. The anticipated reductions in effluent quantity and improvements in effluent quality as measured at the bleach plant and, for AOX, at the end of the pipe.

For those technologies or process modifications that are not commercially available or demonstrated on a full-scale basis when the plan is developed, the plan must include a schedule for research (if necessary), process development, and mill trials. This schedule must show major milestone dates and the anticipated date the technology or process change will be available for mill implementation. The plan must also include contingency plans in case any of the technologies or process modifications specified in the Milestones Plan need to be adjusted or alternative approaches or processes developed to ensure that the mill will meet the ultimate tier limits by the dates in the master schedule.

How Do I Establish Permit Limits That Reflect the VATIP Schedule?

For existing mills that enroll in VATIP, you must establish enforceable permit requirements that become progressively more stringent over time to ensure that mills achieve performance of the selected tier. EPA has established three phases to measure mills' progress in complying with these permit requirements and to ensure their compliance with the selected tier limitations.

- Initial limitations ("Stage 1");
- Intermediate milestones; and
- Ultimate limitations ("Stage 2").

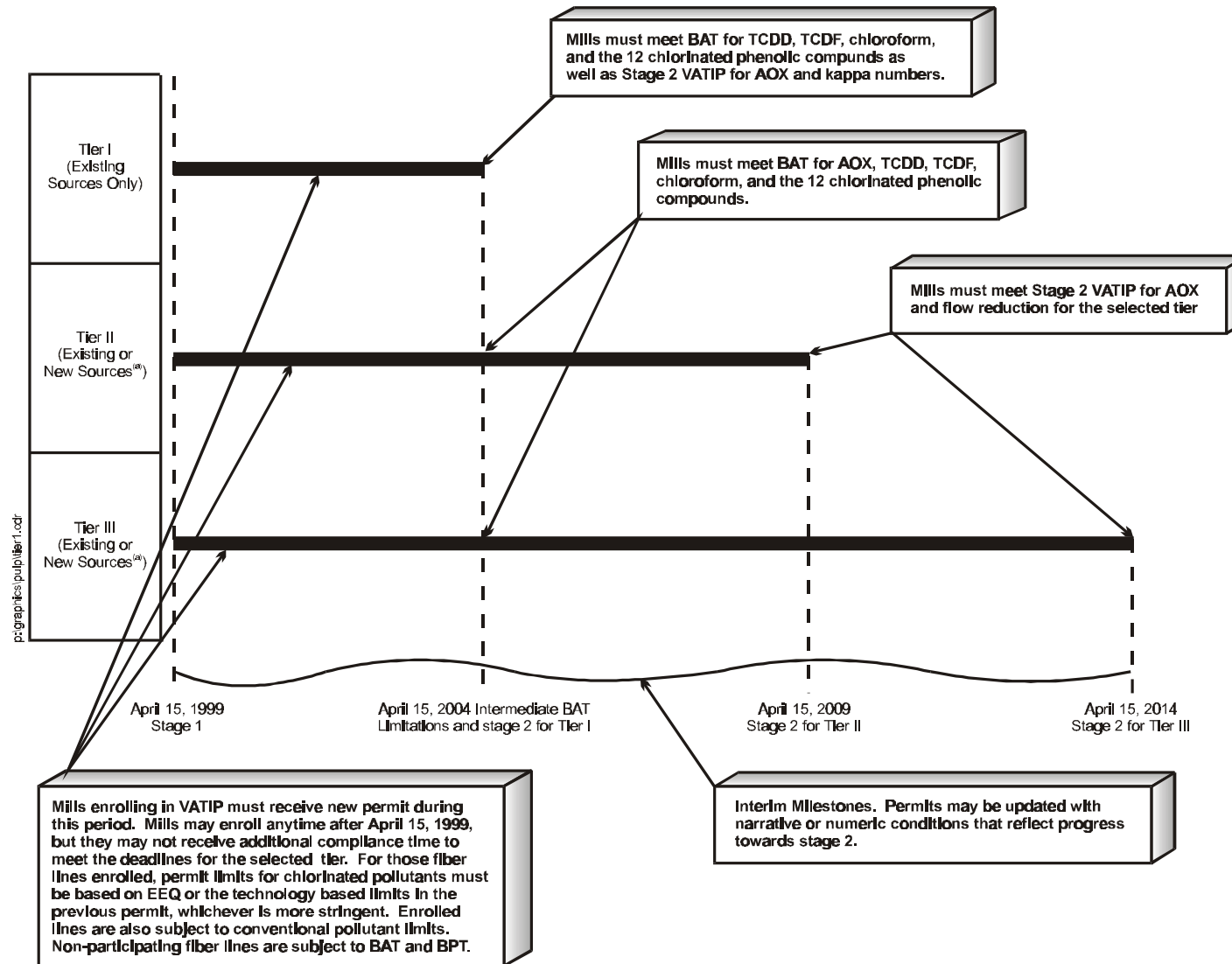
You should include reopener clauses in the NPDES permit of a mill enrolling in VATIP. This will allow you to adjust the permit to reflect the results as the mill implements advanced pollution prevention technologies and improves their effluent quality. Figure 10-1 summarizes the permit process discussion presented below.

Initial Limitations (Stage 1)

Initial limitations (Stage 1) for each fiber line enrolled in VATIP must reflect either *existing* effluent quality (EEQ) or the technology-based limits in the mill's last permit, whichever is more stringent. EEQ refers to the current levels of chlorinated pollutants in the mill's effluent. For pollutants limited in bleach plant effluent (e.g., TCDD), you must determine EEQ at the bleach plant. For AOX, which is limited in the final effluent, you must determine EEQ based on the loadings attributable to the fiber line enrolled in VATIP (i.e., the fiber line's percentage of production multiplied by total AOX load). Appendix E presents detailed procedures for calculating EEQ. Stage 1 limitations ensure that, at a minimum, EEQ is maintained as the mill moves toward achieving Stage 2 limitations in its selected tier.

You must require mills to meet these Stage 1 limitations immediately by including them in the permit because the limitations constitute BAT for enrolled fiber lines engaged in the initial phase of achieving the ultimate limitations (Stage 2). Under the CWA, mills must immediately comply with BAT promulgated after March 31, 1989 (CWA §301(b)(2)). As discussed in more detail in the preamble to the rule (63 FR 18600-06), the remaining VATIP limitations and requirements become BAT over a period of time. The rule requires immediate compliance with those limitations as well (e.g., the "Stage 2" limitations), but only if they have ripened into BAT. For example, for Stage 2 limitations for Tier II, that would be April 15, 2009. See 40 CFR §430.24(b)(4)(ii)(B).

Figure 10-1: Permit Process for Direct Discharges During Each Phase of VATIP



^(a) Note: New sources must comply with VATIP upon commencing operations.

Intermediate Milestones

You must establish two sets of interim milestones that are critical in assuring that mills incrementally improve their effluent quality prior to achieving Stage 2 limits.

1. Intermediate BAT Limitations

You must require existing mills enrolled in all three tiers to comply with interim limitations equivalent to BAT for the 15 regulated chlorinated pollutants no later than April 15, 2004. At that time, note that those mills enrolled in Tier I are also required to fully comply with Stage 2 limitations for AOX and kappa number limits.

EPA anticipates that mills that enroll in Tiers II or III will achieve limits for chlorinated pollutants by April 15, 2004, by substantially modifying pulping and bleaching processes (i.e., installing oxygen delignification, ECF, or TCF). Mills will most likely install oxygen delignification and ECF or TCF processes before achieving the wastewater flow objectives to allow them enough time to design, test, and install emerging or yet-to-be-developed wastewater flow reduction processes to help meet the Stage 2 limitations.

You should note that some mills required to achieve WQBELs or other ELG&S equivalent to one or more of the VATIP ELG&S are eligible to enroll in VATIP and to receive the incentives for achieving all VATIP ELG&S. However, you must require mills to comply with existing WQBELs and other ELG&S by the compliance data specified by the applicable law.

2. Interim Milestones

In addition to establishing intermediate BAT limitations, you may wish to establish interim milestones using the information provided by the mill in their Milestones Plan and BPJ to ensure that the mill is progressing toward the Stage 2 limitations. These intermediate milestones, which may be expressed as *narrative or numeric* conditions in the NPDES permit (40 CFR §430.24(b)(2)), should reflect progressive steps toward achieving limitations in the mill's selected tier.

Ultimate Limitations (Stage 2)

You must require mills to meet ultimate limitations no later than the effective date of the selected tier. Remember, new mills must achieve Stage 2 limitations when they commence operation.

Note that, in addition to VATIP ELG&S, mills enrolled in the incentives program must also meet applicable ELG&S for conventional pollutants (e.g., BOD₅, TSS, and pH), as well as BMP requirements and any appropriate WQBELs.

What are the Reduced Monitoring Requirements?

Table 10-2 presents the reduced minimum monitoring frequencies established for mills that enroll in VATIP. You may reduce the monitoring frequency for mills enrolled in VATIP only *after* they have met Stage 2 requirements.

During the time between Stage 1, when mills must meet EEQ or the technology-based limits in the last permit, and Stage 2, you should require all mills that enroll in VATIP to monitor at the minimum frequencies established for all chlorinated pollutants (see Table 8-4). This monitoring requirement assures that mills demonstrate that they are consistently achieving EEQ and/or BAT limitations. Keep in mind that EPA did not establish minimum monitoring requirements for those mills that certify that they perform TCF bleaching. For these mills, you may use BPJ to establish monitoring frequencies.

Note that VATIP rewards mills that implement advanced pollution prevention technologies that reduce the amount of chlorine and chlorine dioxide used during bleaching. For those mills that certify that they perform advanced ECF bleaching, the required monitoring of TCDD, TCDF, chloroform, and chlorinated phenolic compounds may be suspended and AOX monitoring may be relaxed one year after the mill meets Stage 2 limitations.

Table 10-2: Minimum Monitoring Frequencies for Chlorinated Compounds and AOX for Fiber Lines Enrolled in VATIP

Pollutant	Minimum Monitoring Frequency				
	non-ECF (a)	Advanced ECF (b)(e)			TCF (c)
12 chlorinated phenolics pollutants	monthly	monthly (f)			(d)
2,3,7,8-TCDD	monthly	monthly (f)			(d)
2,3,7,8-TCDF	monthly	monthly (f)			(d)
Chloroform	weekly	monthly (f)			(d)
Pollutant	non-ECF, any Tier (a)	Advanced ECF - Tier I (b)	Advanced ECF - Tier II (b)	Advanced ECF - Tier III (b)	TCF (c)
AOX	daily	weekly (for 1 year after achieving Stage 2)	weekly (for 1 year after achieving Stage 2)	weekly (for 1 year after achieving Stage 2)	(d)
		monthly (for years 2 through 5 after achieving Stage 2)	quarterly (for years 2 through 5 after achieving Stage 2)	annually (for years 2 through 5 after achieving Stage 2)	

(a) Pertains to any fiber line that does not use exclusively ECF or TCF bleaching operations.

(b) Pertains to any fiber line that uses exclusively Advanced ECF bleaching processes.

(c) Pertains to any fiber line that uses exclusively TCF bleaching processes.

(d) This regulation does not specify a limit for this pollutant for TCF bleaching processes. Use BPJ.

(e) You must determine the appropriate monitoring frequency for these pollutants after one year under 40 CFR §122.44(i).

(f) The minimum monitoring frequency applies during the initial compliance demonstration period.

How Does VATIP Enrollment Affect MACT Compliance Schedule?

EPA recently promulgated MACT-based NESHAPs for the pulp and paper industry (see 63 FR 18399 and 40 CFR Part 63). For bleaching operations at existing sources, control of chloroform emissions is based on compliance with the BAT ELG&S. Control of other chlorinated HAPs is based on the use of caustic scrubbing of bleach plant air emissions. Existing sources are required to comply with the NESHAP no later than April 16, 2001.

EPA was concerned that requiring mills to comply in three years with MACT standards based on ClO_2 substitution would discourage mills from enrolling in the VATIP. This is largely because a mill that installs or upgrades a ClO_2 generator before it installs oxygen delignification is likely to construct more capacity than it ultimately will need. A mill that has invested in a large ClO_2 generator would be very reluctant to abandon a portion of that investment soon afterwards in order to participate in the VATIP.

To encourage mills to participate, EPA extended the date for compliance with the bleach plant standards for mills that enroll in VATIP. The NESHAP sets out a two-phased compliance schedule.

1. *Phase One: June 15, 1998 through April 15, 2004.* For existing sources enrolled in VATIP, MACT allows no increase in the existing HAP emission levels from the papergrade bleaching system--i.e., no backsliding--during the initial period when the mill is working toward meeting its VATIP BAT requirements. The effective date of the first phase requirements is June 15, 1998. Mills may not increase their application rates of chlorine or hypochlorite above the average rates determined for the three-month period prior to June 15, 1998.
2. *Phase Two: After April 15, 2004.* For existing sources enrolled in VATIP the mill must achieve the MACT standard for chloroform emission reduction; it must also apply controls for other chlorinated HAPs. To comply with the chloroform standard the mill may either:
 - a. comply with baseline BAT for all pollutants, or
 - b. certify that chlorine and hypochlorite are not used in the bleach plant.

All mills that enroll in the VATIP must comply with the second phase of existing source MACT no later than April 15, 2004.

The MACT rule also allows an extended compliance time for *all* mills to collect and control HVLC gas streams from the kraft pulping process (that is, air emissions from brownstock washing and oxygen delignification). The compliance time is extended from three years to eight years (until April 17, 2006). This time extension will allow mills to make changes needed to comply with BAT, such as upgrading brownstock washing and closing pulp screening, prior to collecting and controlling air emissions from these processes. It will also allow mills to make changes needed to comply with VATIP, such as installation of oxygen delignification, prior to controlling air emissions.